ROLE OF YOGA ASANAS AND MEDITATION IN ENHANCING EXTRA SENSORY PERCEPTION AND WORKING MEMORY IN UNIVERSITY STUDENTS

A
SYNOPSIS
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Extra sensory perception (ESP) is the psychic abilities of mind. The word ESP was coined by Rhine (1934) and is now used extensively in parapsychology and neuroscience. It encompasses many concepts like remote perceptions, Near Death Experience (NDE), clairvoyance, Out of Body Experience (OBEs) etc. There are also a number of cases in which a person is believed to remember events that are alleged to have occurred in their previous lives. There is growing scientific evidence to suggest and prove the possibility of acquiring information that is apparently received independently of the sensory processes, as in extrasensory perception (ESP), and of action of mind over matter independent of the motor system, psychokinesis (PK). The phenomena with which scientific parapsychology deals are designated as psi. Psi includes both ESP and PK. According to some surveys most psychic experiences happen in dreams. Thus dream state can be considered as psi-conducive. Invention of dream monitoring techniques made it possible by the discovery of such physiological correlates of the dream state as rapid eye movements (REMs) has opened opportunity to study ESP testing in laboratories. The current research will examine neglected but important phenomena, ESP with relation to the academic achievements of students. The research will include the sample of 100 students. The respondents will be studied for the presence of 6^{th} sense form, ESP and the data will be recorded at regular intervals. The participants will undergo certain practices like Yoga, regular IQ tests, to increase ESP awareness. Finally the results will be concluded indicating the effect of ESP on the academic results of the students.

ESP is a phenomenon related to the study of perception. The belief is that one can have a perceptual experience without any sensory input. Types of reported ESPs include

- Mental telepathy, the ability to read another person's thoughts
- Forecasting, the ability to predict future incidents accurately

- Clairvoyance, the awareness of some event that one cannot see
- Psychokinesis, the ability to cause things to move by virtue of thought processes

ESP occurs independently of the known sensory processes. Many experiments on ESP have given significant results but still many scientists continue to doubt the existence of ESP powers. People with ESP powers have also been used by investigations agencies to find missing persons or things. ESP—is defined by parapsychologists as the acquisition by a human or animal mind of information it could not have received by normal, sensory means.

Rhine (1973), an American botanist was the first to introduce the scientific research in parapsychology as a branch of psychology. Besides this he also founded the parapsychology lab at the Duke University. Later he had introduced the Journal of Parapsychology, Research Foundation on human behavior and also the Parapsychological Association. Some of the famous books written by him are: Extrasensory Perception and Parapsychology: Frontier Science of the Mind. Rhine Research Center in Durham is still devoted center for parapsychological and cognitive investigations. For ESP testing, Rhine conducted experiments on students for various research experiments. In ESP research, he (1931) did experiment with economics student, Linzmayer at Duke University. He got astonishing results as the student obtained positive and high scoring of hundred percent in Zener card tests. Later he (1930) conducted experiments on Psychokinesis, in laboratory settings. He observed how a subject person could influence the tossed dice and get desired results. The dice was initially thrown manually, than he started tossing the dice in cup and throwing it. Finally he used a machine to toss and throw the dice. **Louisa (1967)** studied ESP in dreams, visions, intuitions, etc. She also studied their effects on real life. She had a massive database to study as over the decades, the Rhine Institute had collected some 14,000 accounts of ESP experiences. Her 1961 book Hidden Channels of the

Mind is a broad study of the different types of ESP, and a good attempt at taxonomy of the paranormal.

The Maimonides dream research experiments involved two experimental controls. The subject and agent persons had to spend the night in the laboratory. The subject was wired up for monitoring brain waves and eye movements. He/she had to spend the night isolated in an acoustically shielded room. The agent, who was to send the telepathic message, under the supervision of a second experimenter, was located in another room. When the subject entered into a period of REM sleep that is deep sleep when dream occurs, the monitoring experimenter buzzed the agent to begin sending the telepathic message. The agent in turn concentrated on the target picture given to him by the second experimenter. The target picture enclosed in a packet was randomly chosen from a pool. The agent did not open the packet until he/she was securely isolated in the sending room. Around the end of each REM period, the experimenter monitoring the subject awakened the subject and asked him/her to describe the dream. This procedure was repeated all through the night. At the end of the night session, the subject was again asked to give the impressions about the night's target picture. At this point, both the experimenter and the subject were completely blind to the target (**Sherwood and Roe, 2002)**

The existence of ESP ability is found in human and higher animals where Central Nervous system (CNS) is well developed. The specialized neurons of CNS have prominent role in developing ESP. In past many experimental evidences have been conducted for testing ESP abilities, some of them are the Rhine experiments, the SRI remote viewing experiments, the research on random number generators, the Ganzfield experiments, etc.

According to the fifth revered Guru of Radhasoami Faith, Sir Anand Sarup kt., ***"The human body is a most wonderful apparatus but the pity is that people are not generally aware***

of its secrets and thus it is not put to its proper use. Besides the five jnanendriyas, the human body contains several other subtle senses by using which man can have knowledge of subtle and spiritual regions. It is only when one controls his mind and senses and turns his spirit or attention inwards and then performs the spiritual practices persistently and assiduously for some time, that success can be achieved." (Sarup, 2010)

Physicist Bell (1960s) explained mathematically that with respect to quantum theory, a pair of particles who were in contact and later moved far apart, should nevertheless behave in correlated ways and cannot be explained by classical statistics. Bell once wrote that ""there must be a mechanism whereby the setting of one measuring device can influence the reading of another instrument, however remote." **(Radin 1997)** Thus when quantum theory proves the relation between two particles at distant, then psi phenomenon like ESP and PK are possible in human experiences. Many studies have been conducted in past for ESP like **Radin (2006)**, **Tanous and Donnelly (2009)** etc. The first laboratory experiment for ESP was conducted by **Lundholm and Rhine** for the trance – telepathy.

Ullman, Krippner & Feldstein (1966) experimentally induced telepathic dreams. They conducted two studies using EEG-REM monitoring. **Krippner (1970)** conducted electrophysiological studies of ESP in dreams. He considered sex differences in seventy four telepathy sessions.

ESP can be developed with the **yoga practice**. Yoga originally is one of the orthodox (Astika) schools of Hindu philosophy, and was compiled as yoga sutras by Rishi Patanjali around 400 CE. The meaning of "yoga" in Sanskrit is union with God. Yoga also means discipline or effort. It signifies an effort to establish union of body and mind. The yoga practices include concentrating one's consciousness on physical body through breathing and postures.

After achieving concentration yoga helps person to seek a deep state of relaxation and overpower the mind. Thus a person reaches a state of enlightenment. Rishi Patanjali prescribed eight limbs of yoga. These are Yama, Niyama, Asana, Pranayama, Pratyahara, Dharana, Dhyana and Samadhi. The first five are external aids while last three are internal aids of Yoga. Five Yama are the abstentions that relate one to the external world and are similar to the five vows of Jainism. Five Yama are ahimsa (non-violence), satya (non-illusion), asteya (non-covetousness), brahmacharya (abstinence) and aparigraha (non-possessiveness). Five Niyama are the five habbits or observances by which one relates to self. These are Shaucha(cleanliness of body and mind), Santosh(satisfaction), Tapas (austerity), Svadhyaya (study of vedic scriptures) and Ishvaraparanidhan (surrender to God). Asanas are the correct postures of the body that are physical aids to meditation. Pranayama is the breathing exercises that control life force energies. Pratyahara is for the withdrawal of senses from the external objects. The last three limbs are internal aids of Yoga. Dharana is concentration on object or image. Dhyan is steadfast meditation distinct from the object of meditation. Finally, Samadhi is the oneness with the object of meditation. The practice helps in increasing consciousness, ESP and concentration that helps in academic gains for individuals.

There are six Chakras present in human body which corresponds to the respective six regions of Brahmaand and Nirmal Chetan Desh. These Chakras, from lower to upper body are Muladhar Chakra, Svadhishtan Chakra, Nabhi Chakra, Hridaya Chakra, Kandth Chakra and Ajna Chakra. The crown Chakra, present in head region corresponds to the highest
Region of Consciousness. By concentrating on higher Chakras, one can establish union with the corresponding region of higher Consciousness. This will help person to recognize and rediscover

the qualities and essence of the Individual Mind and use this access for academic achievements and success in life.

Now Scientists also believes that there exist one intelligent Consciousness and it pervades in entire Universe. It is the **Universal Mind**. It has full knowledge, power, creativity and it is always present. Hence individual mind is the part of Universal mind. According to Einstein, *"Everything is energy" and "a human being is a part of the whole called by us as Thee Universe."* (1951). His words reflect the spiritual and philosophical teachings. Thus the Universal Mind is Omniscience, Omnipotence, Omnificence and Omnipresent. This is also the true nature of the Individual mind as it is the part of the Universal mind. Hence we all have access to an infinite power and to limitless creativity of the creator and we all possess these attributes in their potential form all the time and everywhere. The deep Concentration unites the Individual mind with the Universal mind. Yoga Asanas and meditation helps in achieving Concentration.

On the similarity of Individual mind and Universal mind and to achieve this access, **Satsangi (2010)** gave a message, *"From the Radhasoami Satsang Action Field (i.e. Radhasoami Satsang Dayalbagh Agricultural Field), inspired by and on behalf of the Omnipresent, Omnipotent, Omniscient Supreme Being Radhasoami, I offer my felicitations, blessings and benedictions together with a message of Supreme Peace, Supreme Truth – Intelligence – Bliss and Supreme Truth – Goodness – Beauty; on the occasion of 100 years of existence of Dayalbagh for the blissful life of one and all; not only on this earth but beyond in all material creation, in the twin- Regions of Universal Mind and finally culminating the long journey in the pure spiritual region, and uniting with the Supreme Being forever and eternally, which is the ultimate goal and destiny of all of us."*

Working Memory is the system which helps in momentary storing of information, and processing the information. It is responsible for process of reasoning, comprehension, memory updating and learning. Thus working memory stores and manipulates visual images or other information besides central executive that coordinates the subsystems. It is a theoretical concept that relates to both cognitive psychology and neuroscience. The new concept of Working Memory clarifies the short-term memory concept by focusing more on how we attend, rehearse and manipulate information in temporary storage (Engle 2002). Besides displaying information on-screen, we also actively associate new and old information and solve problems. Thus Working Memory is like a computer's random-access memory (RAM), that integrates information coming in from our keyboard with that retrieved from long-term storage on the hard drive. Part of this Working Memory is visible on our short-term screen.

Baddeley (1992) defines Working Memory as, *"The brain system that provides temporary storage and manipulation of the information necessary for such complex tasks as language, comprehension, learning and reasoning."* Working Memory is necessary for staying focused on a task, blocking out distractions, and keeping one updated and aware of things that are going on in the environment.

AIM OF THE STUDY

The aim of the present research is to study the presence of Extrasensory Perceptions among the University Students and enhancing their ESP and Working Memory with the practice of Yoga Asanas and Meditation.

OBJECTIVES

- To study the role of Yoga Asanas and Meditation in enhancing the ESP of University
- To study the role of Yoga Asanas and Meditation in enhancing the Working Memory of University Students

JUSTIFICATION:

Today's education system in India is good for scoring marks but it certainly not hundred percent in retaining the knowledge once students have completed their studies. The students somehow lack in learning, gaining knowledge and developing a thirst for more knowledge. The ESP or ability to perceive information independent of the known senses may help the students to do so. The ESP abilities can be developed in students so that they can understand dos and don'ts for them while making decisions.

There is urgent need for the program developers to better understand the role of youngsters in the community development and their own psychic development to achieve success in life. By understanding the problems associated with young people and calculating their psychic abilities we can develop a program to improve their cognitive abilities like reasoning and memory etc., so that they can achieve success in their career and life.

METHOD:

HYPOTHESES:

- There is a significant positive effect of Yoga Asanas and Meditation in enhancing ESP of University Students.
- There is a significant positive effect of Yoga Asanas and Meditation in Working Memory of University Students.

OPERATIONAL DEFINITIONS

- **ESP:** The supposed faculty of perceiving knowledge by means other than the known physical senses.
- **WORKING MEMORY:** It is the short-term memory that temporarily stores and manages information required for very complex tasks like reasoning, learning and comprehension. It is concerned with immediate conscious perceptual and linguistic processing.
- **YOGA:** It is a meditational exercise first introduced by **Rishi Patanjali** in one of the six earlier Vedic schools. It has both spiritual and ascetic discipline. Yoga includes breath control exercises, concentration while adopting certain prescribed postures. It has health benefits besides spiritual gains.
- **MEDITATION:** A practice of consciousness for self-realization by concentrating focus on sound, object, breath, name, etc.

VARIABLES:

- The Independent Variable :
  - Yoga Asanas and Meditation

- The Dependent Variables :
  - ESP
  - Working Memory
- Relevant Variables :
  - Age of the Students – 18 to 25 years
  - Education Level – University Students (At least Inter pass)

The students who are willing to participate in the research will only be included

DESIGN:

Single group, pre-test, post-test design will be used

SAMPLE:

100 students from different faculties of Dayalbagh Educational Institute (Arts, Social Sciences, Commerce, Science and Engineering) will be selected for the present study. Purposive Sampling will be done and the age of the students will be between 18 to 25 years.

TOOLS: In the present research ESP and Working Memory will be measured by the following tools:

- **ESP** - Zener Cards : These are used to test psychic ability. There are five different cards with five different images – a star, a square, a circle, a plus sign and three wavy lines. (Matt Jarvis, 2002)

  A deck of 25 cards consists of five cards of each symbol. While conducting the experiment, a subject and a sender are selected. The psychic ability of the subject will be tested here. The sender is the person who will be looking at the cards to be guessed. The experimenter will conduct the test fairly and properly. The sender selects the card, concentrates on the symbol. The subject has to guess the correct

symbol on the card chosen. The cards are regularly shuffled after each trial. Finally the results are analyzed. (Hines, 2003)

FOR QUALITATIVE ANALYSIS, Squid magnetometer and Dream Telepathy Tests will be conducted to measure Consciousness for small group of 10 University Students. Later it can be linked to ESP.

- **Working Memory** – WAIS-III^{UK} : Third Edition by Wechsler (1998)

The Working Memory provides scores for Verbal IQ, Performance IQ and Full Scale IQ, along with four secondary indices – Verbal Comprehension, Working Memory, Perceptual Organization and Processing Speed. The Working Memory Index (WMI) includes three subsets as follows:

1. **Arithmetic** – For this subset, the examinee is presented with a series of arithmetic word problems to be solved mentally, without the use of paper or pencil, and responds orally within a time limit.
2. **Digit Span** – It is composed of two tasks administered independently of each other: Digit Forward and Digit Backward. For each Digits Forward item, the examinee is required to repeat the number sequence in the same order as presented by examiner. For Digit Backward, the examinee is required to repeat the number sequence in the reverse order.
3. **Letter-Number Sequencing** – Here the examinee is read a combination of numbers and letters and is asked to recall the numbers first in ascending order and then the letters in alphabetical order. Each item consists of three trials, and each trial is a different combination of numbers and letters.

PROCEDURE: The research will be conducted in four phases as follows:

Phase I: PRE-TEST- ESP and Working Memory will be measured by respective tools (Zener Test (1934) and Wechsler Adult Intelligence Scale (WAIS-III^{UK}) Test

Phase II: Experimental phase: The researcher will conduct Yoga based Meditation for 30 minutes - 1 hour for three months excluding Sundays. 20 minutes of Yoga Asanas and 10 minutes of Meditation will be practiced by the students. The Yoga Asanas and Meditation will be practiced by the students as follows:

The participants will have to practice Yoga Asanas (postures) such as Bhujangasana, Vajrasana, and Siddhasana. The Yoga Asanas are meant only for good health and concentration. They make body perfect for Concentration and Meditation. After acquiring this state, the participant will be taught to relax toes, then feet, ankles, calves, heart, lungs, neck, hands. Then the brain and mind are relaxed by concentrating on self-spirit. The thoughts of mind will be removed by concentrating on breathe. After the Yoga Asanas are practiced the students will practice meditation. During Meditation, students have to practice to train his/her mind, to reach higher level of consciousness. It is performed by concentrating first on breath, so as to divert senses away from the physical world. The eyes have to be kept closed. The students will then concentrate on God, *Guru*, Sound, Name or any particular Object. Students can follow their own religious beliefs for considering object of concentration. This has to be practiced for 10 minutes.

Phase III: Post test - ESP and Working memory will be measured again by using the same tools

Phase IV: Analyses, Interpretation and Conclusion will be drawn.

STATISTICAL ANALYSIS: Non parametric statistics will be applied to analyze the pre-test and post-test results.

CHAPTER SCHEMA

The chapter scheme for proposed ESP research will be carried out as follows:

Chapter I

a Extra Sensory Perceptions

b Working Memory

c Yoga Asanas and Meditation

d Aim of the present Study

e Hypotheses

f Justification

Chapter II Review of the related Literature

Chapter III Method

a Variables

b Operational Definitions

c Design

d Sample

e Tools

f Procedure

Chapter IV Results and Analyses

Chapter V Interpretation, Discussions and Conclusions

Chapter VI Limitations and Suggestions

References and Appendixes

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